

## **REMARKS**

[0003] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-9, 30-45 and 55-57 are presently pending. Claims amended herein are: Claims 1, 9, 30 and 44. Claims withdrawn and cancelled herein are: Claims 10-29 and 46-54. Claims 58 and 59 have been added herein.

### **Statement of Substance of Interview**

[0004] The Examiner graciously talked with me—the undersigned representative for the Applicant—on March 19, 2008. Applicant greatly appreciates the Examiner's willingness to talk. Such willingness is invaluable to both of us in our common goal of an expedited prosecution of this patent application.

[0005] During the interview, I discussed how the claims differed from the cited art, namely Williams. Without conceding the propriety of the rejections and in the interest of expediting prosecution, I also proposed several possible clarifying amendments.

[0006] The Examiner was receptive to the proposals, and I understood the Examiner to indicate that additional clarifying claim amendments would help to further distinguish the claims from the cited art.

[0007] However, as presented herein, Applicant respectfully disagrees with Examiner's position as discussed during the interview. Accordingly, Applicant

submits that the pending claims are allowable over the cited art of record for at least the reasons as presented herein.

### **Formal Request for an Interview**

**[0008]** If the Examiner's reply to this communication is anything other than allowance of all pending claims, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can talk about this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

**[0009]** Please contact me to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for me, I welcome your call as well. My contact information may be found on the last page of this response.

### **Claim Amendments and Additions**

**[0010]** Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claims 1, 9, 30 and 44 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and more quickly identify allowable subject matter. Such amendments are merely intended to clarify the claimed features, and should not be construed as further limiting the claimed invention in response to cited art.

**[0011]** Furthermore, Applicant adds new claims 58 and 59 herein. These new claims are fully supported by the Application and therefore do not constitute new matter. Please see at least Para [0007] of the specification.

## **Substantive Matters**

### **Claim Rejections under §101**

**[0012]** Claims 9 and 44-47 are rejected under 35 U.S.C. §101. In light of the amendments presented herein, Applicant respectfully submits that these claims comply with the patentability requirements of §101 and that the §101 rejections should be withdrawn. The Applicant further asserts that these claims are allowable. Accordingly, Applicant asks the Examiner to withdraw these rejections.

**[0013]** If the Examiner maintains the rejection of these claims, then the Applicant requests additional guidance as to what is necessary to overcome the rejection.

### **Claim Rejections under § 102**

**[0014]** The Examiner rejects claims 1-9, 30-47 and 55-57 under §102. For the reasons set forth below, the Examiner has not shown that cited references anticipate the rejected claims.

**[0015]** Accordingly, Applicant respectfully requests that the §102 rejections be withdrawn and the case be passed along to issuance.

[0016] The Examiner's rejections are based upon the following reference:  
**Williams:** *Williams, "Pyramidal Parametrics" July 1983.*

### **Overview of the Application**

[0017] The Application describes techniques to produce virtual views of a complex scene. The virtual views are substantially free from aliasing even when using a relatively sparse set of images of the scene. A scene is split into one or more coherent layers. The boundaries of the coherent layers are propagated across a plurality of frames corresponding to the scene. The splitting may be further refined (e.g., in accordance with user feedback) to present a virtual view of the scene.

### **Cited Reference**

[0018] The Examiner cites Williams as the reference in the anticipation-based rejections.

#### *Williams*

[0019] Williams describes a "pyramidal parametric" pre-filtering and sampling geometry which minimizes aliasing effects and assures continuity within and between target images.

## **Anticipation Rejections**

[0020] Applicant submits that the anticipation rejections are not valid because, for each rejected claim, no single reference discloses each and every element of that rejected claim.<sup>1</sup> Furthermore, the elements disclosed in the single reference are not arranged in the manner recited by each rejected claim.<sup>2</sup>

### **Based upon Williams**

[0021] The Examiner rejects claims 1-9, 30-47 and 55-57 under 35 U.S.C. § 102(b) as being anticipated by Williams. Applicant respectfully traverses the rejections of these claims. Based on the reasons given below, Applicant asks the Examiner to withdraw the rejection of these claims.

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<sup>1</sup> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); also see MPEP §2131.

<sup>2</sup> See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Independent Claim 1

[0022] The Examiner indicates (Action, p. 2) the following with regard to this claim:

With respect to claim 1 Williams teaches the claimed method comprising:  
splitting a scene into one or more coherent layers, at figure 1; propagating boundaries of the coherent layers across a plurality of frames corresponding to the scene, at figure 1; and refining the splitting to present a virtual view of the scene, at the third paragraph of the abstract.

[0023] Applicant submits that Williams does not anticipate this claim because it does not show or disclose the following elements as recited in this claim, as amended (with emphasis added):

- “splitting a scene ***into one or more coherent layers***, wherein;  
***each coherent layer*** of the scene has a ***corresponding plane equation to represent a local geometry of that coherent layer***, and  
the one or more coherent layers ***in combination*** represent a ***single plane of the scene***,”
- “propagating ***boundaries of the coherent layers across a plurality of frames*** corresponding to the scene;” and
- “***refining*** the splitting to present a virtual view of the scene”

**[0024]** In this Action, the Examiner equates the “mip” mapping as taught by Williams to the “splitting a scene into one or more coherent layers” as recited in claim 1. Applicant respectfully disagrees.

**[0025]** Williams teaches in Fig 1, a process where the same image becomes smaller and smaller and diminishing down into the corner of a map. Each of the images is averaged down from its predecessor. This process supplements bilinear interpolation of pixel values. This helps improve speed in compressing texture and interpolation.

**[0026]** However, the averaged down images (“mip” mapping) in Williams are not equivalent to the “one or more coherent layers” as recited in claim 1. First of all, in Williams, there is no “splitting” of the image “into one or more coherent layers.” For example, claim 1 recites “each coherent layer of the scene has a corresponding plane equation to represent a local geometry of that coherent layer” and “the one or more coherent layers in combination represent a single plane of the scene.” Please see Figures 3-5 in the instant Application. Williams teaches nothing relating to the splitting of a scene as recited in claim 1. Williams is simply directed towards using the “mip” mapping process in order of offer greater speed in compressing image pixels.

**[0027]** Furthermore, since Williams does not disclose “splitting” a scene, Williams does not teach “propagating boundaries of the coherent layers across a plurality of frames corresponding to the scene;” or “**refining** the splitting to present a virtual view of the scene” as recited in claim 1.

**[0028]** Consequently, Williams does not disclose all of the claimed elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

*Independent Claims 30, 35 and 55*

**[0029]** Similarly, independent claims 30, 35 and 55 each include at least one feature similar to the claimed features as explained above with respect to claim 1. More specifically, claim 30 recites at least “a layer pop-up module to allow a user to define *one or more coherent layers corresponding to a scene;*” and “a refinement module to *refine the coherent layers.*” Claim 35 recites at least “a layer pop-up module to *split a scene into one or more coherent layers;*” and “a refinement module *to refine the splitting* to present a virtual view of the scene.” Claim 55 recites at least “means for *splitting a scene into one or more coherent layers;*” and “means for *refining the splitting* to present a virtual view of the scene.” Thus independent claims 30, 35 and 55 are allowable over the cited art for at least similar reasons as claim 1. Accordingly, Applicant asks the Examiner to withdraw the rejection of these claims.

*Dependent Claims 2-9, 31-34, 36-43 and 56-58*

**[0030]** These claims ultimately depend upon one of independent claims 1, 30, 35 or 55. As discussed above, claims 1, 30, 35 and 55 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.



**[0031]** For example, claim 5 recites “wherein the refining is initiated by a user.” With respect to this claim, the Examiner indicates (OA p. 3):

Claim 5 further requires the method as recited in claim 1, wherein the refining is initiated by a user. Williams teaches this at section 7 which lists users involved in implementing this refining technique.

**[0032]** However, section 7 of Williams is simply the acknowledgement section, which further states in addition to particular acknowledgements, “Paul Heckbert, for refining and speeding up both creation and accessing routines.” (Williams, p. 10) This section does not teach the user initiated refining as recited in claim 5. Applicant does not see any manner in which the claimed subject matter is properly addressed.

*Independent Claim 44*

**[0033]** The Examiner indicates (Action, p. 2) the following with regard to this claim:

Claims 30, 35, 44 and 55 are similar to claim 1 and are rejected under similar rationale.

**[0034]** In addition to the explanation given above with respect to claim 1, Applicant submits that Williams does not anticipate this claim because it does not show or disclose the following elements as recited in this claim, as amended (with emphasis added):

"splitting a scene into one or more coherent layers, wherein;

each coherent layer of the scene has a corresponding plane equation to represent a local geometry of that coherent layer; and

the ***one or more coherent layers in combination represent a single plane of the scene;***

propagating boundaries of the coherent layers across a plurality of frames corresponding to the scene, wherein ***the plurality of frames correspond to different images of the scene;***

refining the splitting to present a virtual view of the scene, wherein the refining is;

***initiated by a user;***

***allows the user to select at least one of the coherent layers;***

***allows the user to refine the corresponding plane equation of the selected coherent layer; and***

***allows the user to inspect and adjust the rendering quality of the selected coherent layer in real time;***

rendering the coherent layers with ***a corresponding background layer*** to present the virtual view of the scene, wherein the background layer is provided by ***combining a plurality of under-segmented regions."***

[0035] Again, Williams does not teach “splitting a scene into one or more coherent layers;” and “refining the splitting to present a virtual view of the scene” as recited in claim 44. Thus, Williams also does not disclose the amended claimed elements as recited, which further help distinguish this claim from the cited art.

[0036] Consequently, Williams does not disclose all of the claimed elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

*Dependent Claims 45 and 59*

[0037] These claims ultimately depend upon independent claim 44. As discussed above, claim 44 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, these claims may also be allowable for additional independent reasons.

**Dependent Claims**

[0038] In addition to its own merits, each dependent claim is allowable for the same reasons that its base claim is allowable. Applicant requests that the Examiner withdraw the rejection of each dependent claim where its base claim is allowable.

**Expectation that the Next Action will not be Final**

[0039] Applicant submits that all pending claims are in condition for allowance. If the examiner feels otherwise and believes that another action on the merits is necessary, then Applicant expects such an action would be Non-Final.

[0040] According to 37 CFR § 1.113 and MPEP 706.07, the “examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal.” “The invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied.”

[0041] In accordance with 37 CFR § 1.113 and MPEP 706.07(a), Applicant respectfully submits that finality would be premature for the next action for the following reasons:

- The Applicant took no action herein that necessitates that the Examiner perform a new search or introduce a new ground of rejection; and
- This Office Action failed to address specific claimed aspects that the Applicant has previously indicated as differing from the cited art.

**No Action necessitating new grounds for rejection or new search**

[0042] Herein, for example, Applicant does not and has not amended independent claims 35 and 55. Consequently, one or more claims presented

herein have already been examined in the Office Action. Furthermore, Applicant explains herein why these already-examined claims differ from the cited art of record. Therefore, in accordance with 37 CFR § 1.113 and MPEP 706.07(a), finality for the next action would be premature.

### **Rejecting claims without specific support or reasoning**

**[0043]** While the Office Action provides a blanket rejection that includes claim 30, the Office Action fails to address claim 30 with specificity. In other words, the Office Action does not cite any references (alone or in combination) that disclose all of the elements of claim 30 and in their particular claimed arrangement.

**[0044]** Applicant submits that the examiner has not yet addressed specific claim language that the Applicant submits distinguishes the claims from the cited reference. It is not that the examiner disagreed about whether specific claim language distinguishes the claims from the cited references. Rather, it appears that the examiner has not addressed whether specific claim language distinguishes the claims from the cited references.

**[0045]** For example, claim 30 recites “a user interface” and “a layer pop-up module to allow a user to define one or more coherent layers corresponding to a scene.” This claimed element has not been addressed in the blanket rejection provided by the Examiner.

**[0046]** Since the Examiner has provided little or no reasoning for his rejections, Applicant can do little more than gainsay. Applicant is forced to make

assumptions and guesses as to the Examiner's specific reasoning. Therefore, Applicant submits that it has been denied its right to adequately and effectively respond to the Office's rejections.

**[0047]** In *In re Lee*, 61 USPQ2d 1430 (CA FC 2002), the Federal Circuit explained the following on page 1433:

The Administrative Procedure Act, which governs the proceedings of administrative agencies [such as the Patent and Trademark Office] and related judicial review, establishes a scheme of "reasoned decision-making." Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational. Allentown Mack Sales and Service, Inc. v. National Labor Relations Bd., 522 U.S. 359, 374 (1998) (citation omitted).

This standard requires that the agency not only have reached a sound decision, but have *articulated the reasons for that decision*. The reviewing court is thus enabled to perform meaningful review within the strictures of the APA, for the court will have a basis on which to determine "whether the decision was based on the relevant factors and whether there has been a clear error of judgment." *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971). [emphasis added]

**[0048]** Applicant submits that the Office has not articulated the reasons for its decision-making here. Furthermore, according to the reasons and facts given above and to 37 CFR § 1.113 and MPEP 706.07, Applicant respectfully submits that no clear issues has been developed between the applicant and the Examiner for each pending claim so that such issues would be ready for appeal if the next action is made final. Accordingly, Applicant respectfully requests that the next action—if not a Notice of Allowance—be Non-Final.

## **Conclusion**

**[0049]** All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call/email me or my assistant at your convenience.

Respectfully Submitted,

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